

## NOAA's Oil Spill Response

# Sea Turtle Strandings and the Deepwater Oil Spill



Sea turtle stranding responders, working under the guidance of the Wildlife Branch Unit of the Unified Command, which includes several NOAA experts, are responding to sea turtle strandings of predominantly dead animals and are rescuing some heavily oiled sea turtles from the spill area.



*Credit: University of California, Davis*

All the living turtles captured in the on water operation are cleaned of oil and are being rehabilitated at the Audubon Aquarium outside New Orleans.

NOAA experts are examining turtles that have stranded dead in the area affected by the oil spill to determine, if possible, whether their deaths can be linked to oil, or another cause. While the complete results can take several weeks because of the time needed to analyze samples, none of the turtle necropsies performed to date have shown evidence of oil, externally or internally.

Some of the more recent stranded turtles that have not yet been necropsied have had visible external evidence of oil. More necropsies of dead sea turtles are planned. We do believe that this spill will significantly affect sea turtles in the Gulf of Mexico. Flyovers and the on-water operation have shown sea turtles swimming in or near the oil spill.

## General Affects of Oil on Sea Turtles

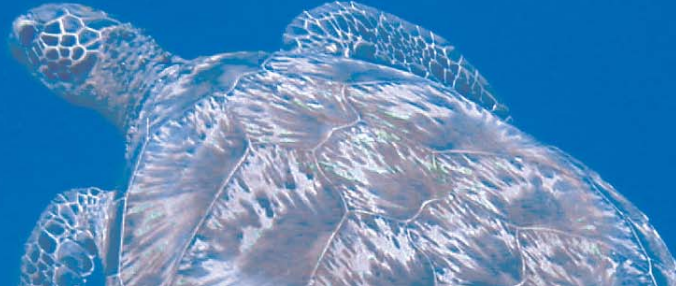
Sea turtles may be exposed to chemicals in oil or to chemicals in products such as dispersants used in two ways: internally (eating or swallowing oil, consuming prey containing oil based chemicals, or inhaling of volatile oil related compounds) and externally (swimming in oil or dispersants).

Several aspects of sea turtle behavior put them at risk including the importance to turtles of surface convergence areas, typically highly productive areas where ocean currents converge and where oil has been found. These areas provide feeding and sheltering habitat to sea turtles in the Gulf of Mexico. Sea turtles are air breathers and all must come to the surface frequently to take a breath of air. In a large oil spill, these animals may be exposed to volatile chemicals during inhalation.

Additionally, sea turtles may experience oiling impacts on nesting beaches when they come ashore to lay their eggs, and their eggs may be exposed during incubation potentially resulting in increased egg mortality and/or possibly developmental defects in hatchlings. Hatchlings emerging from their nests may encounter oil on the beach and in the water as they begin their lives at sea.

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**External Effects:** Oil and other chemicals on skin and body may result in skin and eye irritation, burns to mucous membranes of eyes and mouth, and increased susceptibility to infection.

**Internal Effects:** Inhalation of volatile organics from oil or dispersants may result in respiratory irritation, tissue injury, and pneumonia. Ingestion of oil or dispersants may result in gastrointestinal inflammation, ulcers, bleeding, diarrhea, and maldigestion. Absorption

of inhaled and ingested chemicals may damage organs such as the liver or kidney, result in anemia and immune suppression, or lead to reproductive failure or death.



## Reasons for Sea Turtle Strandings

There are thousands of sea turtle strandings every year along the Gulf of Mexico and U.S. east coast. NOAA is working to understand why sea turtles are stranding in the area of interest. In previous years, this same area has experienced increased strandings during this time of year. The stranding numbers we are seeing currently in Louisiana, Mississippi and Alabama are higher than normal, however. This may be due in part to increased detection and reporting, but this does not fully account for the increase.

Primary human causes for sea turtle deaths in the Gulf of Mexico include fishing bycatch and vessel strikes. Bycatch in shrimp trawls is recognized as a leading source of sea turtle mortality if Turtle Excluder Devices (TEDs) are not properly used. Other types of fishing gear that incidentally catch and can kill sea turtles include longline gear and nets.

There are five sea turtle species in the Gulf of Mexico. Kemp's Ridley, leatherback, hawksbill, and green sea turtles are listed as endangered under the Endangered Species Act; loggerhead sea turtles are listed as threatened.

## Rehabilitating Oiled Sea Turtles

Through the Wildlife Branch, Marine Mammal and Sea Turtle Unit of the Unified Command, NOAA has implemented region-wide protocols for caring for turtles in distress and established four rehabilitation/de-oiling centers: one in Louisiana, one in Mississippi, and two in Florida. Additional facilities are on standby if needed. NOAA is working closely with U.S. Fish and Wildlife Service, through the Unified Command, on addressing issues of concern on sea turtle nesting beaches in the Gulf of Mexico as well. Wildlife teams on the water have been instructed to bring any turtles in distress back to shore for transport to the rehabilitation facilities.

To get the latest numbers of strandings and animals that have been captured as part of the Wildlife Branch Unit's on water search and rescue operation go to <http://response.restoration.noaa.gov/deepwaterhorizon>.

Learn more about NOAA's response to the BP oil spill at <http://response.restoration.noaa.gov/deepwaterhorizon>.

To learn more about NOAA, visit <http://www.noaa.gov>. 



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